Serial No. 10/632,320 Filed: August 1, 2003

Page 2 of 11

In the Claims:

1. (Original) A wireless terminal comprising:

a housing;

an electronic circuit disposed within the housing;

a flat-panel speaker positioned proximate a back side of the electronic circuit within the housing; and

an internal antenna positioned proximate the flat-panel speaker on the back side of the electronic circuit within the housing.

- 2. (Original) The wireless terminal of Claim 1, wherein the flat-panel speaker is integrated with the internal antenna.
- 3. (Original) The wireless terminal of Claim 2, wherein the flat-panel speaker and the internal antenna each comprise conductive portions that reside on a first primary surface of a common substrate.
- 4. (Original) The wireless terminal of Claim 1, wherein the internal antenna is a planar antenna.
- 5. (Original) The wireless terminal of Claim 1, wherein the housing includes an earpiece and a keyboard on a front face of the housing, and wherein the electronic circuit is positioned between the front face of the housing and the flat panel speaker and internal antenna.
- 6. (Original) The wireless terminal of Claim 5, wherein the electronic circuit comprises a printed circuit board, and wherein the wireless terminal further comprises a forward acoustic passageway extending from the flat-panel speaker to the earpiece, the forward acoustic passageway comprising at least one acoustic aperture extending through the

Serial No. 10/632,320 Filed: August 1, 2003

Page 3 of 11

printed circuit board adjacent the flat-panel speaker.

- 7. (Original) The wireless terminal of Claim 6, wherein the internal antenna is positioned between the printed circuit board and the flat-panel speaker and wherein the forward acoustic passageway further comprises at least one acoustic aperture extending through the internal antenna.
- 8. (Original) The wireless terminal of Claim 1, wherein the electronic circuit comprises a printed circuit board having a signal feed and a ground plane, and wherein the internal antenna is operatively coupled to the signal feed and the ground plane.
 - 9. (Currently amended) [[The]] A wireless terminal of Claim 1, comprising: a housing;

an electronic circuit disposed within the housing;

a speaker positioned proximate a back side of the electronic circuit within the housing;

an internal antenna positioned proximate the speaker on the back side of the electronic circuit within the housing; and

wherein the electronic circuit includes an audio driver circuit coupled through a balanced feed to the flat-panel speaker.

- 10. (Original) The wireless terminal of Claim 9, wherein the balanced feed comprises a plurality of leads, and wherein the electronic circuit further comprises an RF isolation circuit on each lead of the balanced feed.
- 11. (Original) The wireless terminal of Claim 10, wherein the RF isolation circuit comprises a tank circuit.
 - 12. (Original) The wireless terminal of Claim 10, wherein the RF isolation circuit

Serial No. 10/632,320 Filed: August 1, 2003

Page 4 of 11

comprises an inductor.

- 13. (Original) The wireless terminal of Claim 1, wherein the flat-panel speaker is configured to act as a parasitic element to the internal antenna.
- 14. (Original) The wireless terminal of Claim 13, wherein the flat-panel speaker is configured to act as a parasitic element that provides a lower frequency range frequency response for the internal antenna.
 - 15. (Currently amended) [[The]] <u>A</u> wireless terminal of <u>Claim 13</u>, <u>comprising</u>: <u>a housing</u>;

an electronic circuit disposed within the housing;

a speaker positioned proximate a back side of the electronic circuit within the housing;

an internal antenna positioned proximate the speaker on the back side of the electronic circuit within the housing; and

wherein the flat-panel speaker is configured to act as a parasitic element to the internal antenna that provides an increased bandwidth frequency response for the internal antenna.

- 16. (Original) The wireless terminal of Claim 13, wherein the flat-panel speaker is configured to act as a parasitic element that provides a multi-band frequency response for the internal antenna.
- 17. (Original) The wireless terminal of Claim 1, wherein the internal antenna comprises a planar inverted-F antenna (PIFA).
- 18. (Original) The wireless terminal of Claim 1, wherein the internal antenna comprises a single-contact patch antenna.

Serial No. 10/632,320 Filed: August 1, 2003

Page 5 of 11

- 19. (Original) The wireless terminal of Claim 1, wherein the internal antenna comprises a monopole antenna.
- 20. (Original) The wireless terminal of Claim 2, wherein the electronic circuit comprises:

an audio driver circuit coupled to the flat-panel speaker through a balanced feed comprising a plurality of leads;

an antenna driver circuit in communication with the internal antenna; and a signal compensation circuit in communication with the audio driver circuit and the antenna driver circuit, wherein when the internal antenna is in transmit mode the signal compensation circuit compensates a signal from the audio driver circuit to the flat-panel speaker.

- 21. (Original) An antenna subassembly comprising:
- a planar antenna; and
- a flat-panel speaker, wherein the flat-panel speaker is integrated with the planar antenna.
- 22. (Original) The antenna subassembly of Claim 21, wherein the flat-panel speaker and the planar antenna each comprise conductive portions that reside on a first primary surface of a common substrate.
- 23. (Currently amended) [[The]] <u>An</u> antenna subassembly of Claim 21, comprising:

a planar antenna;

a speaker, wherein the speaker is integrated with the planar antenna; and wherein the antenna subassembly further comprises an electronic circuit including an audio driver circuit coupled through a balanced feed to the flat-panel speaker.

Serial No. 10/632,320 Filed: August 1, 2003

Page 6 of 11

- 24. (Original) The antenna subassembly of Claim 23, wherein the balanced feed comprises a plurality of leads, and wherein the electronic circuit further comprises an RF isolation circuit on each lead of the balanced feed.
- 25. (Original) The antenna subassembly of Claim 24, wherein the RF isolation circuit comprises a tank circuit.
- 26. (Original) The antenna subassembly of Claim 24, wherein the RF isolation circuit comprises an inductor.
- 27. (Original) The antenna subassembly of Claim 21, wherein the flat-panel speaker is configured to act as a parasitic element to the planar antenna.
- 28. (Original) The antenna subassembly of Claim 27, wherein the flat-panel speaker is configured to act as a parasitic element that provides a lower frequency range frequency response for the planar antenna.
- 29. (Currently amended) [[The]] <u>An</u> antenna subassembly of Claim 27, comprising:

a planar antenna;

a speaker, wherein the speaker is integrated with the planar antenna; and wherein the flat panel speaker is configured to act as parasitic element to the planar antenna that provides an increased bandwidth frequency response for the planar antenna.

- 30. (Original) The antenna subassembly of Claim 27, wherein the flat-panel speaker is configured to act as a parasitic element that provides a multi-band frequency response for the planar antenna.
 - 31. (Original) The antenna subassembly of Claim 21, wherein the planar antenna

Serial No. 10/632,320 Filed: August 1, 2003

Page 7 of 11

comprises a planar inverted-F antenna (PIFA).

- 32. (Original) The antenna subassembly of Claim 21, wherein the planar antenna comprises a single-contact patch antenna.
- 33. (Original) The antenna subassembly of Claim 21, wherein the planar antenna comprises a monopole antenna.